

hydrolysis products of organic materials (in col.s 2 and 3) that provide shea butter (col. 4, line 66 – col. 5, line 18) at the instant 6% + (48%) unsaponifiables as substantive compositions with anti-free radical activity, for dermatological/cosmetic use. Actives, and emollient/conditions are added (in col 7 line 7 to col 8 line 4). Shea butter, and the soy, avocado, olive sources, are all known as containing high % of their oils and fats as long chain carbon materials, as shown by applicant (in pages 10 and 11). Methods of providing benefits to skin are disclosed at col. 5, lines 40-61, examples 7-10, and claims 22 and 23.

The applicant respectfully disagrees with the examiner. Laur's primary disclosure is a method for concentrating unsaponifiables by first separating the non-polar fraction from the polar fraction (the fraction that contains the unsaponifiables since they are soluble in polar solvents) of a material. The unsaponifiables in the polar fraction are then concentrated by crystallization, which is accomplished by introducing a second solvent into the polar fraction, the unsaponifiables being at least one component that is insoluble in the second solvent. And finally, separating the crystallized unsaponifiables from the pot liqueur. Thus it can be seen that Laur discloses concentrating the naturally occurring concentration present in a material via crystallization. This is clearly different from the present application where a naturally occurring high unsaponifiable fraction if is further increased using the process of hydrolysis. In this process, a natural material containing both a saponifiable fraction and a saponifiable fraction is subjected to caustic conditions thereby converting the saponifiable fraction into hydrolysates and additional unsaponifiables. The original fraction of unsaponifiables are unaffected by the caustic conditions, with the exception that they are added to by the additional unsaponifiable fraction.

While Laur has a secondary disclosure of refining the natural product by hydrolysis, a clear reading of the disclosure shows that the hydrolysates produced (what Laur calls "soap") is discarded from the mix and therefore does not form a part of the ultimate product.

The examiner has rejected claims 1-13 and 22-34 as being anticipated by Koulbanis et al. (FR 241775). The examiner feels that page 5 of the translation discloses 20-40% unsaponifiables, with jojoba, sunflower oil, as emollients. The compositions are prepared by mixing extracts; thus, they were inherently pre-treated, at least by refinement (separation of the oil from the vegetable) and is recognized as being a treatment product (in pages 4 and 5).

The applicant disagrees with the examiner. What Koulbanis actually discloses is the addition of a previously extracted unsaponifiable component to a blend of two oils, said oils containing an unsaponifiable and a saponifiable portion. What Koulbanis does not disclose, and what is actually claimed, is a composition that is the mixture of non-polar unsaponifiables with polar hydrophilic salts, both of which are the products of hydrolysis of organic materials, said organic material initially comprising at least 6 weight percent unsaponifiable materials prior to the hydrolysis of the organic materials. More specifically, Koulbanis does not disclose the hydrolysis of an organic material initially containing at least 6 percent by

weight unsaponifiable materials. Koulbanis does not disclose mixing the polar hydrophilic salts and the non-polar unsaponifiables that result from the hydrolysis, regardless of the initial concentration of unsaponifiables. In fact, what Koulbanis teaches is the opposite, separation of the unsaponifiables from the salts and addition to other organic material. At most, Koulbanis teaches that the separated unsaponifiable portion may contain a fraction of saponifiable materials, but Koulbanis does not teach that the separated unsaponifiable portion would contain any of the polar salts (which it would not since separation utilizes the non-polar nature of the unsaponifiables and would exclude the polar salts). Thus, since Koulbanis does not contain all of the elements of the applicants invention, as now claims, it does not properly anticipate them. Therefore the applicant respectfully requests that the examiner withdraw the instant rejection.

The examiner has rejected claims 1-9 and 22-30 as being anticipated by Monnier et al. (US Pat. 5,705,722). The examiner feels that Monnier discloses (in col 1, last paragraph) pre-processed organics (tall oil) of over 6% unsaponifiables (col. 2, top; 10-40%). Examples of UFA's of over C<sub>18</sub> are at Example 4. Pre-treatment includes hydro treating (example 2) and other treatment processes (col 3, lines 25-43). Fragrances (aldehydes) are present (Table A).

The applicant respectfully disagrees with the examiner. Monnier actually teaches away from the applicant's invention. The first paragraph of col. 2 clearly states that "The tall oil may be a high quality tall oil ... or it may be a crude tall oil which as been processed to remove undesirable components, such as ash and unsaponifiables." Thus, Monnier actually teaches the removal of the unsaponifiables, not the inclusion as required by the claims. Moreover, Monnier, at no point, discloses that the tall oil is hydrolyzed. At most, Monnier teaches that the tall oil may be depitched (thermal evaporation), solvent extraction, solid-phase adsorption, or liquid chromatography, all of which are to remove unsaponifiables, not include them into the mixture. While Monnier also discloses hydro-treating, hydro-treating is not hydrolysis and in no way produces the polar salts as required by the claims as they now stand. Further, inspection of Monnier clearly shows that there is not disclosure of the hydrolysis of tall oil to produce a polar salt portion and a non-polar unsaponifiable portion that are then mixed together. Thus, since Monnier does not include all of the elements of the applicant's claims, it does not properly anticipate the applicant's invention. Therefore, the applicant respectfully requests that the examiner withdraw the instant rejection.

In re Application  
Serial No.:  
Atty. Docket No.:

Copeland et al.  
09/478,071  
511-003

Art Group: 1616  
Examiner: Levy, N.

### ***Conclusion***

The applicant has fully responded to the issued presented by the applicant and has patentably differentiated his invention over the prior art. Therefore, the applicant respectfully requests that the examiner withdraw all rejections and allow the claims to pass to issuance.

Respectfully submitted,

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